Technical Memorandum No. 4: Current Economic Patterns and Trends

Abstract

The purpose of this technical memorandum is to present a baseline economic profile of the five counties most likely to be affected by the extension of SR 504. This technical memorandum was prepared by Northwest Economic Associates (NEA).

Definitions of Economic Components

There are several economic terms that we will be using in this memorandum that are defined here.

1. Income components. Personal income, which is used to describe money earned by residents of an area, is derived in the following manner: Earnings by place of work (i.e., money earned within the region), *less* personal contribution for social insurance, *plus* adjustment for residence (net inflow of the earnings of inter-area commuters, i.e., earnings of residents of the area who work outside the area), *equals* net earnings by place of residence. Net earnings by place of residence, *plus* dividends, interest, and rent, *plus* transfer payments (income maintenance payments, unemployment insurance benefit payments, and retirement and other related payments), *equals* personal income. Per capita income is the amount of personal income divided by population, and is often used to compare the "well-being" of a region with another.
2. Employment components. Total employment is comprised of farm plus nonfarm employment, and is measured in terms of the number of jobs (whether full-time or part-time). Nonfarm employment includes both private and government employment. Employment may be further divided into categories which relate to the industry in which the work is performed, such as the retail trade, or manufacturing industry.
3. Population components. Population is projected by 5-year age cohorts and also by males and females. Total population and age cohorts are discussed in this study.

Baseline

Study Area

The study area for the *SR 504 Feasibility Project* is comprised of five counties, Clark, Cowlitz, Lewis, Skamania, and Yakima. Data describing the current and past economic patterns of these five counties are presented in the following tables and text. This data will serve as the baseline, or starting point, for comparing among the proposed alternatives, and for evaluating the economic impacts associated with the most likely alternative.

Cities and Towns

Many of the cities and towns within the five counties of the study area are likely to be affected by the SR 504 expansion. Once a preferred alternative route is selected, the specific cities and towns that are in close proximity to the route can be identified in order to discuss potential impacts. A general list of cities and towns found in the five counties, with recent population estimates, is found in the following table.

Table 1. Cities and Towns in the Study Area (with 1999 Population Estimates)

Clark County	**337,000**	**Cowlitz County**	**94,100**	**Lewis County**	**69,000**
Unincorporated	*169,190*	*Unincorporated*	*40,610*	*Unincorporated*	*42,185*
Incorporated	*167,810*	*Incorporated*	*53,490*	*Incorporated*	*26,815*
Battle Ground	9,075	Castle Rock	2,105	Centralia	13,620
Camas	10,870	Kalama	1,630	Chehalis	7,010
La Center	1,545	Kelso	11,960	Morton	1,275
Ridgefield	2,115	Longview	34,190	Mossyrock	565
Vancouver	135,100	Woodland *part*	3,605	Napavine	1,255
Washougal	7,975			Pe Ell	685
Woodland *part*	110			Toledo	690
Yacolt	1,020			Vader	490
				Winlock	1,225

Skamania County	**9,900**	**Yakima County**	**212,300**		
Unincorporated	*8,029*	*Unincorporated*	*93,313*	Selah	6,005
Incorporated	*1,871*	*Incorporated*	*118,987*	Sunnyside	12,290
North Bonneville	596	Grandview	8,190	Tieton	1,122
Stevenson	1,275	Granger	2,255	Toppenish	7,940
		Harrah	545	Union Gap	5,350
		Mabton	1,655	Wapato	3,975
		Moxee	1,050	Yakima	65,500
		Naches	715	Zillah	2,395

Source: Washington State Office of Financial Management, Forecasting Division, *April 1 Population of Cities, Towns, and Counties Used for the Allocation of Designated State Revenues State of Washington*, June 7, 2000.

The largest city within the five county region is Vancouver, in Clark County, with a 1999 estimated population of 135,100. The next largest in the area would be Yakima, in Yakima County, with a population of 65,500, followed by Longview, in Cowlitz County, population 34,190. The remaining cities and towns are far smaller, with populations ranging from 490 (Vader, in Lewis County) to 13,620 (Centralia, in Lewis County).

Once a preferred route is selected for the SR 504 expansion, it will be possible to identify which of these towns and cities may be affected. It is also worth noting that a large portion of the population in these counties is found in areas that are unincorporated. Impacts on this "rural population" should be considered when evaluating alternatives.

Current and Past Economic Patterns

Clark County

Clark County is one of the most rapidly growing counties in Washington State, in all economic categories. In 1998 it was ranked 5th in the state by population. Between 1969 and 1998, the population of Clark County grew at an average annual rate of 3.3%, more than doubling from 1970 to 1998 (see Table 1 below). Personal income, transfer payments, and per capita income grew at average annual rates of 10.7%, 12.0%, and 7.1%, respectively.

Table 2. Clark County Personal Income Components and Trends (in thousands of dollars, unless otherwise noted)

Category	1970	1980	1990	1998	AARG*
Personal Income	499,097	1,923,605	4,498,699	8,801,580	10.7%
Earnings by Place of Work	316,890	1,042,283	2,548,517	4,554,493	9.9%
Less: Personal Contribution for Social Insurance	10,856	46,759	154,015	283,795	12.3%
Plus: Adjustment for Residence	78,608	423,692	754,150	1,831,389	11.4%
Equals: Net Earnings by Place of Residence	384,642	1,419,216	3,148,652	6,102,087	10.2%
Plus: Dividends, Interest, and Rent	65,372	294,241	839,195	1,739,014	12.7%
Plus: Transfer Payments	49,083	210,148	510,852	960,479	12.0%
Population (number of persons)	129,619	193,230	240,803	327,418	3.3%
Per Capita Personal Income (dollars)	3,850	9,955	18,682	26,882	7.1%

* AARG = Average Annual Rate of Growth (1969-1998).

Source: U.S. Department of Commerce, Economics and Statistics Administration, Bureau of Economic Analysis, Regional Economic Information System 1969-98, June 2000.

Clark County employment has shown steady and strong growth in all non-farm employment sectors since 1970 (see Table 3). Manufacturing employment in Clark County continues to grow, thanks to the diversification into high technology and other forms of manufacturing.

More traditional industries such as pulp and paper and primary metals continue to be major employers even after a decade of restructuring. Residential and commercial construction have remained strong for several years, and retail trade and services jobs have greatly expanded despite Portland's sales tax advantage.

Table 3. Clark County Employment Trends

Category	1970	1980	1990	1998	AARG*
Total Full- and Part-Time Employment	43,050	68,859	107,642	150,432	4.5%
Farm Employment	1,424	2,079	1,877	1,757	0.7%
Nonfarm Employment	41,626	66,780	105,765	148,675	4.5%
Ag. Services, Forestry, Fishing, & Other	260	568	1,161	1,700	6.7%
Mining	59	165	488	605	10.0%
Construction	2,207	4,473	8,422	13,502	6.5%
Manufacturing	10,896	13,202	17,745	21,197	2.2%
Transportation & Public Utilities	2,225	2,793	4,906	7,318	4.3%
Wholesale Trade	765	1,897	3,690	6,195	7.6%
Retail Trade	5,612	11,950	18,398	27,322	5.7%
Finance, Insurance, & Real Estate	2,527	5,158	7,679	11,108	5.3%
Services	7,314	14,649	27,655	40,279	6.2%
Government & Government Enterprises	9,761	11,925	15,621	19,449	2.6%

* AARG = Average Annual Rate of Growth (1969-1998).

Source: U.S. Department of Commerce, Economics and Statistics Administration, Bureau of Economic Analysis, Regional Economic Information System 1969-98, June 2000.

The Interstate Bridge (I-5), opened in 1917, and the I-205 bridge, opened in 1982, connect Clark County to Portland, Oregon. Commuting from Vancouver to Portland is common — approximately one-third of Clark County's work force commutes to Portland to work. This commute was largely one-way during the 1960s, 1970s, and late 1980s, but by the end of the 1980s, the number of Oregonians commuting into Clark County increased noticeably (to about 11,000) due to expanding employment within Clark County.

Unemployment in Clark County has been among the lowest in the state of Washington, thanks to its diverse economic base and proximity to Portland, Oregon (see Table 4).

Table 4. Clark County Unemployment

Category	1970	1980	1990	1998
Civilian Labor Force (persons)	50,690	92,700	127,500	176,300
Unemployed (persons)	3,340	6,600	5,800	7,100
Unemployment Rate (percent)	6.6%	7.1%	4.5%	4.0%

Source: Washington State Employment Security Department, Labor Market and Economic Analysis Branch, *Clark County, Selected Economic Data*, 2000.

Cowlitz County

Cowlitz County was ranked 12th in the state in population in 1998 and has experienced relatively slow economic growth between 1969 and 1998.

Personal income has not kept pace with inflation over the entire period. The manufacturing sector — the largest sector of the county's economy — was particularly hard hit in the recession of the 1980s, and has yet to fully recover. Population has only grown at an average annual rate of 1% in the period of 1969 through 1998 (see Table 5). Personal income has grown at an average annual rate of 7.5% over the same period, while transfer payments have outpaced it, growing at an annual average rate of 10.6%.

Table 5. Cowlitz County Personal Income Components and Trends (in thousands of dollars, unless otherwise noted)

Category	1970	1980	1990	1998	AARG*
Personal Income	270,729	804,985	1,400,828	1,997,357	7.5%
Earnings by Place of Work	233,850	673,901	1,046,279	1,381,105	6.7%
Less: Personal Contribution for Social Insurance	9,025	34,098	68,294	90,227	8.8%
Plus: Adjustment for Residence	-12,250	-60,478	-44,510	-37,318	5.6%
Equals: Net Earnings by Place of Residence	212,575	579,325	933,475	1,253,560	6.7%
Plus: Dividends, Interest, and Rent	30,900	115,341	242,605	363,379	9.4%
Plus: Transfer Payments	27,254	110,319	224,748	380,418	10.6%
Population (number of persons)	68,799	79,601	82,450	91,409	1.0%
Per Capita Personal Income (dollars)	3,935	10,113	16,990	21,851	6.4%

* AARG = Average Annual Rate of Growth (1969-1998).

Source: U.S. Department of Commerce, Economics and Statistics Administration, Bureau of Economic Analysis, Regional Economic Information System 1969-98, June 2000.

Total employment within Cowlitz County has grown at an annual average rate of 1.7% over the 1969-1998 period (see Table 6).

Table 6. Cowlitz County Employment Trends

Category	1970	1980	1990	1998	AARG*
Total Full- and Part-Time Employment	29,464	37,238	43,059	47,565	1.7%
Farm Employment	436	595	639	672	1.4%
Nonfarm Employment	29,028	36,643	42,420	46,893	1.7%
Ag. Services, Forestry, Fishing, & Other	348	677	713	852	2.8%
Mining	21	37	62	203	8.5%
Construction	1,260	2,495	2,890	3,413	3.9%
Manufacturing	11,245	11,133	10,819	10,123	-0.3%
Transportation & Public Utilities	1,590	1,876	1,894	2,003	0.9%
Wholesale Trade	505	776	1,482	1,407	3.8%
Retail Trade	4,218	5,883	7,773	8,908	2.7%
Finance, Insurance, & Real Estate	1,334	1,926	2,190	2,569	2.3%
Services	4,175	7,014	9,486	11,397	3.5%
Government & Government Enterprises	4,332	4,826	5,111	6,018	1.4%

* AARG = Average Annual Rate of Growth (1969-1998).

Source: U.S. Department of Commerce, Economics and Statistics Administration, Bureau of Economic Analysis, Regional Economic Information System 1969-98, June 2000.

During the 1970s and into the 1980s, the combined lumber, wood, and paper and pulp industries accounted for more than 7,500 jobs in Cowlitz

County. After weathering national economic recessions and efficiency measures during the first half of the 1980s, employment in these industries fell. Forest-related industries still account for roughly 6,500 jobs and lead all others as the county's major source of employment.

Other industries have also played significant historical roles in the economic development of the county, with fishing, food processing, agriculture, dairying, and aluminum reduction in the forefront.

River valleys and bottomlands in the county are abundant in rich and fertile volcanic soil, which, combined with ample rainfall and mild temperatures, induced early settlers to attempt to cultivate the land. The climate, however, is not well suited to most crops, but has proved perfect for growing crops used to feed dairy animals (dairying crops). The dairy industry continues to operate today, and the southern region around the town of Woodland has developed a substantial livestock and dairy industry that supplies much of Vancouver and Portland. Operations in Longview, Kelso, and Castle Rock supply milk to plants which produce cheese and cream for local and statewide distribution.

Unemployment data for the county are presented in Table 7.

Table 7. Cowlitz County Unemployment

Category	1970	1980	1990	1998
Civilian Labor Force (persons)	27,500	34,610	37,910	41,650
Unemployed (persons)	2,220	3,720	2,550	3,270
Unemployment Rate (percent)	8.1%	10.7%	6.7%	7.9%

Source: Washington State Employment Security Department, Labor Market and Economic Analysis Branch, *Cowlitz County, Selected Economic Data*, 2000.

Lewis County

The economy of Lewis County is presently one in transition. While much of the county is still given over to agriculture, the significance of the timber industry has been declining. Great gains over the past couple of decades in efficiency have decreased employment, and environmental concerns may continue to cause more cutbacks in the future. However, there have been increases in light industry (both Chehalis and Centralia have developed industrial parks, and one is planned for Morton) and retail trade. The county is making the transition between a resource based, extractive economy to one with an emphasis on light manufacturing and commerce.

Personal income has not quite kept pace with inflation, but the retail trade, services, and government sectors have provided some stability and diversity to the economy. Personal income has grown at an annual average rate of 7.9% over the period 1969 to 1998 (see Table 8). Transfer payments have grown at a greater rate, 10.5% over the period 1969 to 1998. The "adjustment for residence" has become a much larger negative

number over time, indicating that more money earned within the county is leaving with wage earners who commute to Lewis County from other areas.

Table 8. Lewis County Personal Income Components and Trends (in thousands of dollars, unless otherwise noted)

Category	1970	1980	1990	1998	AARG*
Personal Income	172,700	514,500	911,487	1,359,751	7.9%
Earnings by Place of Work	131,410	361,000	600,695	851,311	7.3%
Less: Personal Contribution for Social Insurance	4,802	16,729	36,198	52,535	9.4%
Plus: Adjustment for Residence	879	-3,711	-10,844	-11,803	-23.0%
Equals: Net Earnings by Place of Residence	127,487	340,560	553,653	786,973	7.0%
Plus: Dividends, Interest, and Rent	23,554	93,620	182,615	272,513	9.4%
Plus: Transfer Payments	21,659	80,320	175,219	300,265	10.5%
Population (number of persons)	45,612	56,186	59,553	68,094	1.4%
Per Capita Personal Income (dollars)	3,786	9,157	15,305	19,969	6.4%

* AARG = Average Annual Rate of Growth (1969-1998).

Source: U.S. Department of Commerce, Economics and Statistics Administration, Bureau of Economic Analysis, Regional Economic Information System 1969-98, June 2000.

Total employment has, on average, grown at slightly over two percent annually between 1969 and 1998 (see Table 9). All employment sectors, except mining, have experienced growth rates of between one and four percent annually over the last 29 years.

The Lewis County farm sector comprises a larger share of earnings and employment than Clark, Cowlitz, and Skamania counties.

Table 9. Lewis County Employment Trends

Category	1970	1980	1990	1998	AARG*
Total Full- and Part-Time Employment	18,769	25,758	29,879	34,204	2.3%
Farm Employment	1,310	2,179	1,591	1,745	1.0%
Nonfarm Employment	17,459	23,579	28,288	32,459	2.3%
Ag. Services, Forestry, Fishing, & Other	274	506	921	1,065	4.4%
Mining	100	683	838	(D)	12.0%
Construction	1,827	885	1,197	1,780	1.6%
Manufacturing	4,193	5,056	4,963	4,553	0.2%
Transportation & Public Utilities	725	1,175	1,595	1,535	2.9%
Wholesale Trade	455	1,083	1,094	1,087	2.8%
Retail Trade	3,090	4,388	5,680	7,931	3.3%
Finance, Insurance, & Real Estate	1,058	1,336	1,193	(D)	1.0%
Services	2,742	4,508	6,238	7,152	3.5%
Government & Government Enterprises	2,995	3,959	4,569	5,202	2.1%

* AARG = Average Annual Rate of Growth (1969-1998).

(D) indicates data not shown to avoid disclosure of confidential information.

Source: U.S. Department of Commerce, Economics and Statistics Administration, Bureau of Economic Analysis, Regional Economic Information System 1969-98, June 2000.

Unemployment data are presented in Table 10.

Table 10. Lewis County Unemployment

Category	1970	1980	1990	1998
Civilian Labor Force (persons)	18,100	23,980	26,240	33,060
Unemployed (persons)	1,750	2,730	2,080	2,760
Unemployment Rate (percent)	9.7%	11.4%	7.9%	8.3%

Source: Washington State Employment Security Department, Labor Market and Economic Analysis Branch, *Lewis County, Selected Economic Data*, 2000.

Skamania County

Skamania County is one of the lesser populated counties in the state. In 1998, it was ranked 34th of the 39 counties in Washington. However, its population grew at a slightly greater rate, 2.0%, than the statewide average, 1.85%, for the period of 1969-1998 (see Table 11). Overall, Skamania County's personal income components have increased at a fair to moderate rate. Personal income has grown at an average annual rate of 9% over the 1969 to 1998 period, while being slightly outpaced by transfer payments, growing at 11.1%.

Table 11. Skamania County Personal Income Components and Trends (in thousands of dollars, unless otherwise noted)

Category	1970	1980	1990	1998	AARG*
Personal Income	18,762	77,434	131,784	204,526	9.0%
Earnings by Place of Work	13,821	91,092	48,879	67,506	7.0%
Less: Personal Contribution for Social Insurance	449	4,529	2,110	3,306	9.5%
Plus: Adjustment for Residence	714	-28,217	38,839	71,645	23.1%
Equals: Net Earnings by Place of Residence	14,086	58,346	85,608	135,845	8.5%
Plus: Dividends, Interest, and Rent	2,628	10,938	29,314	39,538	10.8%
Plus: Transfer Payments	2,048	8,150	16,862	29,143	11.1%
Population (number of persons)	5,834	7,895	8,327	9,779	2.0%
Per Capita Personal Income (dollars)	3,216	9,808	15,826	20,915	6.8%

* AARG = Average Annual Rate of Growth (1969-1998).

(D) indicates data not shown to avoid disclosure of confidential information.

"n/a" indicates that data is not available.

Source: U.S. Department of Commerce, Economics and Statistics Administration, Bureau of Economic Analysis, Regional Economic Information System 1969-98, June 2000.

Nearly 80% of the county is extensively forested, and as a result, most settlement and commerce has historically developed along the banks of the Columbia River. Federal water projects have provided economic growth for the region, with the most recent the 1975 to 1982 construction of a second powerhouse at the Bonneville Dam. This project created a temporary boom in construction employment as well as modest job creation in the local retail and service sectors.

The current county economy is based largely on government employment, especially management of national forest and of fish and wildlife. The balance is distributed among logging and lumber, tourism and recreation, and light manufacturing. Services employment was boosted considerably when the Skamania Lodge, a resort destination, was completed in 1993.

Tourism has played an increasing role in the county's economy, with such tourist attractions as the Columbia River Gorge National Scenic Area and the Gifford Pinchot National Forest (of which roughly 80 percent of Skamania County's land mass is part), with its mountains, mineral hot springs, ancient lava beds, and Mount St. Helens.

Employment has experienced only a slight growth between 1969 and 1998, with an average annual growth rate of 1.3% (see Table 12). The effects of the construction effort at Bonneville Dam can be seen in the construction sector in 1980 (1,517 jobs, compared to 172 jobs in 1998). The greatest rate of growth has been experienced in the services sector, at 5.4%, much of which can be attributed to the development of the Skamania Lodge in Stevenson.

Table 12. Skamania County Employment Trends

Category	1970	1980	1990	1998	AARG*
Total Full- and Part-Time Employment	2,084	4,025	2,598	2,941	1.3%
Farm Employment	104	108	93	98	-0.4%
Nonfarm Employment	1,980	3,917	2,505	2,843	1.4%
Ag. Services, Forestry, Fishing, & Other	(L)	56	47	42	n/a
Mining	(D)	(D)	19	(D)	n/a
Construction	51	1,517	123	172	4.8%
Manufacturing	742	745	595	406	-2.2%
Transportation & Public Utilities	96	121	82	94	0.5%
Wholesale Trade	(D)	(D)	(L)	(D)	n/a
Retail Trade	139	213	258	343	3.4%
Finance, Insurance, & Real Estate	45	61	66	123	3.6%
Services	257	257	388	784	5.4%
Government & Government Enterprises	557	795	925	832	1.4%

* AARG = Average Annual Rate of Growth (1969-1998).

(D) indicates data not shown to avoid disclosure of confidential information.

(L) indicates less than 10 jobs.

"n/a" indicates that data is not available.

Source: U.S. Department of Commerce, Economics and Statistics Administration, Bureau of Economic Analysis, Regional Economic Information System 1969-98, June 2000.

Skamania County has experienced the highest rates of unemployment for the five counties discussed here, with rates as high as 12.0% in 1970 and 12.8% in 1980 (see Table 13).

Table 13. Skamania County Unemployment

Category	1970	1980	1990	1998
Civilian Labor Force (persons)	2,250	4,380	3,910	4,220
Unemployed (persons)	270	560	390	420
Unemployment Rate (percent)	12.0%	12.8%	10.0%	10.0%

Source: Washington State Employment Security Department, Labor Market and Economic Analysis Branch, *Skamania County, Selected Economic Data*, 2000.

Yakima County

Yakima County was ranked 7th in population out of the state's 39 counties in 1998. However, its population has shown slow growth over the 1969-1998 period, with an average of 1.5% annual growth (see Table 14). Personal income grew at a rate of 8.2% over the same period, and was slightly outpaced by the growth in transfer payments, at 10.0%.

Table 14. Yakima County Personal Income Components and Trends (in thousands of dollars, unless otherwise noted)

Category	1970	1980	1990	1998	AARG*
Personal Income	500,777	1,556,884	2,965,915	4,533,160	8.2%
Earnings by Place of Work	357,616	1,036,638	1,852,162	2,887,510	7.6%
Less: Personal Contribution for Social Insurance	11,572	44,700	100,759	154,393	9.7%
Plus: Adjustment for Residence	8,409	60,017	62,799	77,695	9.9%
Equals: Net Earnings by Place of Residence	354,453	1,051,955	1,814,202	2,810,812	7.5%
Plus: Dividends, Interest, and Rent	71,027	263,256	612,900	850,483	9.5%
Plus: Transfer Payments	75,297	241,673	538,813	871,865	10.0%
Population (number of persons)	145,600	173,118	189,428	218,808	1.5%
Per Capita Personal Income (dollars)	3,439	8,993	15,657	20,718	6.5%

* AARG = Average Annual Rate of Growth (1969-1998).

Source: U.S. Department of Commerce, Economics and Statistics Administration, Bureau of Economic Analysis, Regional Economic Information System 1969-98, June 2000.

Agriculture plays a large role in the economy of Yakima County. It is one of the leading producers of agricultural products in the state of Washington. Much of the local economy is linked to agriculture, as processing and shipping of fruits and produce add to region's industrial base (more than half of the manufacturing employment is in food processing). Other natural resource based industries are of importance in the county, including a significant lumber and wood industry, from which complementary industries such as logging operations and sawmills have developed.

The 1980s were economically challenging times for the county, and for most of eastern Washington. The double-dip national recessions were devastating. Work ended on the WPPSS nuclear power project (which had driven up construction employment in the 1970s). The Soviet grain

embargo hurt many in the agricultural community. The combination of these factors served to stunt economic growth for most of the decade in eastern Washington. The average wage declined precipitously and per capita income was essentially flat. When recovery ensued, the 1990-91 recession appeared. However, it was relatively mild and since then the county's economy and employment have been growing at a reasonably moderate pace. Since then, the services sector has seen one of the largest growth rates among the sectors.

While total employment for Yakima County has grown at the relatively slow rate of 2.1% over the period 1969-1998, employment in agricultural services, forestry, fishing, and other has grown at a rate of 6.3% over the same period (see Table 15).

Table 15. Yakima County Employment Trends

Category	1970	1980	1990	1998	AARG*
Total Full- and Part-Time Employment	63,707	82,879	102,840	114,609	2.1%
Farm Employment	14,237	14,208	18,463	16,676	0.6%
Nonfarm Employment	49,470	68,671	84,377	97,933	2.4%
Ag. Services, Forestry, Fishing, & Other	757	2,396	3,788	4,144	6.3%
Mining	74	131	98	38	-1.6%
Construction	2,140	3,401	3,596	5,012	3.0%
Manufacturing	7,029	7,914	9,966	11,454	1.8%
Transportation & Public Utilities	2,121	3,158	3,485	3,725	1.9%
Wholesale Trade	5,153	7,196	7,743	7,854	1.5%
Retail Trade	9,172	12,860	15,552	17,804	2.2%
Finance, Insurance, & Real Estate	3,489	4,042	4,416	5,274	1.6%
Services	10,350	16,796	22,967	28,269	3.5%
Government & Government Enterprises	9,185	10,777	12,766	14,359	1.7%

* AARG = Average Annual Rate of Growth (1969-1998).

Source: U.S. Department of Commerce, Economics and Statistics Administration, Bureau of Economic Analysis, Regional Economic Information System 1969-98, June 2000.

Unemployment in Yakima County has remained above 10% since 1970 (see Table 16).

Table 16. Yakima County Unemployment

Category	1970	1980	1990	1998
Civilian Labor Force (persons)	60,430	82,700	102,300	114,800
Unemployed (persons)	6,450	8,600	10,900	12,000
Unemployment Rate (percent)	10.7%	10.4%	10.7%	10.5%

Source: Washington State Employment Security Department, Labor Market and Economic Analysis Branch, *Yakima County, Selected Economic Data*, 2000.

Current Regional Economy

Potential economic impacts which may result from the extension of SR 504 will be analyzed in a future technical memorandum, to be produced by NEA once a preferred alternative is selected. For this purpose, NEA will use an input-output (I-O) model, one of the most commonly used methods

of quantifying regional economic changes. An I-O model allows for measuring the flow of commodities and services among the businesses and industries present within a region. Because businesses within a local economy are linked together through the purchase and sales patterns of goods and services produced in the local area, an action that has a direct impact on one or more local industries is likely to have an indirect impact on many other businesses in the region. For instance, an increase in the number of recreation visits resulting from the SR 504 extension may lead to an increase in recreation spending for lodging, food, and supplies. Firms providing production inputs and support services for these establishments will also see an increase in revenue as demand for these products increases. These additional effects are known as the indirect economic impacts.

For this study, NEA developed I-O models for the five relevant counties using data provided by the Minnesota IMPLAN Group (MIG) and IMPLAN modeling software. The MIG data is developed annually using data collected at the national, state, and county level for all possible elements from a variety of state and federal sources. For this study, the available data was for the year 1997. An I-O model of this sort can be thought of as a "picture" or "snapshot" of a region's economic structure at one point in time. The baseline data from each of the models are presented in this section, and will serve as a base from which to measure the economic impacts resulting from the preferred route.

Clark County

Looking at the 1997 IMPLAN data presented in the Table 17, which will serve as a base for impact analysis, total output for all industries in Clark County is over $14 billion. In terms of output, the largest industry in Clark County is manufacturing, with a total output of nearly $5 billion. Employee compensation is over $4 billion for the county. Total income, which includes employee compensation, proprietary income (payments received by self-employed individuals), and other business type income (payments from interest, rents, royalties, dividends, and profits), is over $7 billion for the county.

Total employment in Clark County is over 147,000, with 38,000 jobs in the services sector, and 32,000 in the trade sector (includes both retail and wholesale trade).

It is evident from this data that Clark County has a very diverse economy, and any impacts related to the SR 504 expansion will be spread among a number of different sectors.

Table 17. Clark County IMPLAN Base Year Information, 1997

Industry Group	Total Output *($millions)*	Employee Compens. *($millions)*	Total Income *($millions)*	Employment *(# of jobs)*
Agriculture	110.2	28.3	72.1	2,736
Mining	41.9	15.3	27.3	365
Construction	1,427.0	446.5	612.6	15,562
Manufacturing	4,968.1	1,015.2	1,577.3	21,763
Transportation, Communication, and Public Utilities	1,134.2	259.6	541.8	6,616
Trade	1,591.5	633.3	898.2	32,253
Finance, Insurance, and Real Estate	1,724.0	201.7	1,098.0	10,405
Services	2,241.6	887.9	1,268.7	38,428
Government	1,363.9	745.8	1,003.3	18,462
Other	21.9	5.8	21.9	718
TOTALS	**14,624.4**	**4,239.4**	**7,121.2**	**147,308**

Source: Minnesota IMPLAN Group (MIG), Inc., 1997 IMPLAN Data.

Cowlitz County

Total output for Cowlitz County is a little over $4.5 billion (see Table 18). The largest industry by far, in terms of output, is manufacturing, which produces $2.2 billion, or nearly half of the output for the county. Employee compensation of about $1.3 billion is generated in the county, a portion of total income which is approximately $2.1 billion.

Total employment within the county is about 47,000, with the largest employment found in the services, trade, and manufacturing sectors (over 10,000 employees in each of those sectors).

Table 18. Cowlitz County IMPLAN Base Year Information, 1997

Industry Group	Total Output *($millions)*	Employee Compens. *($millions)*	Total Income *($millions)*	Employment *(# of jobs)*
Agriculture	66.3	16.4	40.4	1,405
Mining	30.9	10.6	15.7	234
Construction	407.2	142.6	188.3	4,116
Manufacturing	2,217.8	488.3	760.4	10,278
Transportation, Communication, and Public Utilities	309.1	77.3	131.4	2,074
Trade	434.7	172.0	243.9	10,407
Finance, Insurance, and Real Estate	305.6	39.6	198.7	2,187
Services	530.2	201.2	288.9	10,670
Government	281.2	194.7	222.2	5,449
Other	7.5	2.4	7.5	333
TOTALS	**4,590.5**	**1,345.0**	**2,097.4**	**47,152**

Source: Minnesota IMPLAN Group (MIG), Inc., 1997 IMPLAN Data.

Lewis County

Total output from all sectors is $2.8 billion in Lewis County, with the largest amount (nearly $0.8 billion) produced by the manufacturing sector (see Table 19). Employee compensation generated by all industries is about $0.85 billion, and total income $1.4 billion.

Employment within Lewis County is nearly 35,000 jobs, with the largest employer being the trade sector, with nearly 9,000 jobs. This is followed by services (7,00 jobs), manufacturing (5,000 jobs), and government (5,000 jobs). A number of jobs are found in the agriculture and construction sectors, each with over 2,500 jobs.

Table 19. Lewis County IMPLAN Base Year Information, 1997

Industry Group	**Total Output** *($millions)*	**Employee Compens.** *($millions)*	**Total Income** *($millions)*	**Employment** *(# of jobs)*
Agriculture	231.8	24.8	89.8	2,568
Mining	128.4	22.5	54.9	354
Construction	266.1	97.2	117.8	2,724
Manufacturing	794.2	164.2	280.1	4,998
Transportation, Communication, and Public Utilities	236.3	55.3	120.5	1,595
Trade	371.6	150.2	212.1	8,876
Finance, Insurance, and Real Estate	188.2	24.6	121.5	1,330
Services	357.4	140.9	198.6	6,990
Government	239.6	166.5	195.4	4,944
Other	5.7	2.5	5.7	374
TOTALS	**2,819.3**	**848.5**	**1,396.4**	**34,752**

Source: Minnesota IMPLAN Group (MIG), Inc., 1997 IMPLAN Data.

Skamania County

Skamania County has a smaller economy than the other counties in the study area, in terms of output and employment. Total output from all sectors in the county is $195 million (see Table 20). The largest portion of this output is produced by the manufacturing sector ($55 million), followed by government ($39 million) and services ($38 million). Total income in the county is $104 million, of which $63 million is from employee compensation.

Employment in Skamania County is nearly 3,000, with the largest employer the government sector, with nearly 900 jobs, followed closely by services, with 800 jobs. Other relatively large employers are the manufacturing sector, with 360 jobs, and the trade sector, with 330 jobs.

Table 20. Skamania County IMPLAN Base Year Information, 1997

Industry Group	Total Output *($millions)*	Employee Compens. *($millions)*	Total Income *($millions)*	Employment *(# of jobs)*
Agriculture	8.1	1.6	4.4	135
Mining	3.1	0.7	1.0	24
Construction	12.6	3.2	4.6	160
Manufacturing	55.2	10.3	18.7	361
Transportation, Communication, and Public Utilities	11.9	3.3	5.3	97
Trade	8.5	3.1	4.9	332
Finance, Insurance, and Real Estate	17.7	1.8	11.5	150
Services	38.3	11.8	20.0	813
Government	39.3	27.2	33.0	892
Other	0.3	0.1	0.3	15
TOTALS	**195.0**	**63.1**	**103.6**	**2,979**

Source: Minnesota IMPLAN Group (MIG), Inc., 1997 IMPLAN Data.

Yakima County

Total industry output for Yakima County is over $8 billion, with the largest portion produced by the manufacturing sector, with $2.2 billion in output (see Table 21). Other major producers in the region are services ($1.3 billion), trade ($1.2 billion), and agriculture ($1.1 billion). Employee compensation in Yakima County is nearly $2.5 billion, and total income is nearly $3.9 billion.

Over 115,000 jobs are found across all industries in Yakima County. Major employers in the county are the services sector, with nearly 27,000 jobs, the trade sector, with 26,000 jobs, and agriculture, with 21,000 jobs. government (14,000 jobs) and manufacturing (12,000 jobs) are also significant employers in the county.

Table 21. Yakima County IMPLAN Base Year Information, 1997

Industry Group	Total Output *($millions)*	Employee Compens. *($millions)*	Total Income *($millions)*	Employment *(# of jobs)*
Agriculture	1,125.3	210.3	443.4	21,020
Mining	8.1	0.8	4.0	32
Construction	515.1	147.9	212.4	5,865
Manufacturing	2,185.9	375.9	561.9	12,029
Transportation, Communication, and Public Utilities	490.6	102.4	234.1	3,577
Trade	1,226.3	482.4	691.1	26,434
Finance, Insurance, and Real Estate	687.9	97.3	447.9	4,547
Services	1,264.1	510.9	706.2	26,745
Government	601.3	513.7	558.1	14,257
Other	16.6	7.4	16.7	948
TOTALS	**8,121.0**	**2,449.0**	**3,875.6**	**115,454**

Source: Minnesota IMPLAN Group (MIG), Inc., 1997 IMPLAN Data.

Social Accounts

The I-O models constructed for the five counties will be used to portray the effects on jobs, income, and output of the selected SR 504 construction alternative. Another tool that can give a picture of the region's economy is the Social Accounting Matrix (SAM). Aggregate (less-detailed) versions of the SAM are presented below for each of the counties.

The purpose of an I-O model is to show the market based trade flows between sectors of the economy. It shows the flows (or linkages) between sectors for intermediate production or demand and flows to institutions (households, government, investment, etc.) for final consumption or demand, and the flow to exports (production needs and consumption needs outside of the economy). The key point is that these are flows within a market system. There are flows that occur outside the market system, such as taxes to government from businesses and households, or social security payments from government to households (and thus back into the market system). The social accounts, presented in the SAM, track the monetary flows between industries and institutions, i.e., both market and non-market flows.

Like an I-O model, the SAM is a snapshot of part of the economy at one point in time (in this case, the year 1997). It resembles a double entry bookkeeping system, with the totals for each column equal to the total for its corresponding row (the total for column 1 equals the total for row 1). In an I-O model, this means that the dollar value of inputs into an industry equals the dollar value of outputs from that industry. For a SAM, it means that the dollar flows into an entity equal the dollar flows out of that entity. For example, the dollar flows into government equals the dollar flows out of government.

The SAM is fairly simple. Each row cell represents an institutional or industry receipt of income. Each column cell represents an institutional or industry payment or disbursement. The SAM tracks the dollar flows through the economy as sets of income and payments.

The flows can be seen by examining any of the following SAM tables for the five counties. Looking at the industry total column, we see the inputs that are needed by Industry to produce their total output. Moving down the column, there are entries in the employee compensation, proprietary income, other property income, and indirect business taxes rows. These are payments to labor, entrepreneurial skills, capital, and government for producing the goods and services that are produced in the county economy.

The employee compensation, proprietary income, other property income, and indirect business tax columns show how this income is distributed to institutions. The employee compensation column shows how this flows to

households as wage and salary income, to federal government (non-defense) as social security taxes, and to state and local government as workman's compensation, unemployment insurance, and other payroll type taxes. Proprietary income is distributed to households and to the federal government as social security taxes. Other property income is distributed to households as rents, business transfers (insurance payments, legal settlements, gifts from businesses), and net interest paid by businesses, to the federal and state/local governments as net interest less subsidies (e.g., Post Office), to enterprises, and to capital. The enterprise sector is a special sector added to capture corporate profits and transfer them to institutions as dividends and other payouts of profit. Indirect business taxes (excise taxes, customs duty, non-tax related income) are distributed to federal and state/local governments.

The households column shows the distribution of income from household institutions. The entries in the federal government non-defense and state/local government non-education rows are payments of taxes. The enterprise column shows the distribution of business profit in the form of dividends to households and taxes to the federal and state/local government.

Table 22. Clark County Aggregate Social Accounting Matrix, 1997

		Institution Receipts (READ ACROSS)			FACTORS				INSTITUTIONS										TRADE		
		Institution Payments (READ DOWN)	Industry Total	Commodity Total	Employee Compen-sation	Proprietary Income	Other Property Income	Indirect Business Taxes	House-holds	Federal Govt. Non-Defense	Federal Govt. Defense	Federal Govt. Investment	State/Local Govt. NonEduc.	State/Local Govt. Educ.	State/Local Govt. Investment	Enterprises (Corps.)	Capital	Inventory Additions/ Deletions	Foreign Trade	Domestic Trade	
			1001	2001	5001	6001	7001	8001	10000	11001	11002	11003	12001	12002	12003	13001	14001	14002	25001	28001	Total
	1001	Industry Total	0.0	8,984.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	904.3	4,736.8	14,624.4
	2001	Commodity Total	3,189.1	0.0	0.0	0.0	0.0	0.0	3,667.1	63.1	62.0	5.3	184.3	400.4	53.1	0.0	1,517.0	57.3	0.0	0.0	9,098.9
FACTORS	5001	Employee Compensation	4,239.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4,239.4
FACTORS	6001	Proprietary Income	608.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	608.4
FACTORS	7001	Other Property Income	2,273.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2,273.3
FACTORS	8001	Indirect Business Taxes	557.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	557.9
INSTITUTIONS	10000	Households	0.0	1.5	3,588.5	575.8	679.8	0.0	177.2	968.5	0.0	0.0	349.8	0.0	0.0	287.5	623.1	0.0	31.5	1,362.4	8,645.5
INSTITUTIONS	11001	Federal Govt. NonDefense	0.0	0.3	590.0	32.7	2.5	44.0	1,006.7	0.0	0.0	0.0	0.0	0.0	0.0	212.5	0.0	0.0	0.2	0.2	1,889.0
INSTITUTIONS	11002	Federal Govt. Defense	0.0	0.0	0.0	0.0	0.0	0.0	0.0	89.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	89.3
INSTITUTIONS	11003	Federal Govt. Investment	0.0	0.0	0.0	0.0	0.0	0.0	0.0	12.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	12.1
INSTITUTIONS	12001	State/Local Govt. NonEduc.	0.0	89.5	57.5	0.0	21.9	514.0	69.6	108.1	0.0	0.0	0.0	0.0	0.0	13.0	164.7	0.0	0.1	3.4	1,041.9
INSTITUTIONS	12002	State/Local Govt. Educ.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	418.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	418.8
INSTITUTIONS	12003	State/Local Govt. Investment	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	61.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	61.8
INSTITUTIONS	13001	Enterprises (Corporations)	0.0	0.0	3.4	0.0	794.0	0.0	0.0	34.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	831.8
INSTITUTIONS	14001	Capital	0.0	21.1	0.0	0.0	825.8	0.0	714.3	520.7	20.6	0.0	0.0	0.0	0.0	318.8	0.0	0.0	12.4	325.9	2,759.6
INSTITUTIONS	14002	Inventory Additions/Deletions	0.0	2.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	72.3	0.0	3.5	7.8	85.7
TRADE	25001	Foreign Trade	414.0	0.0	0.0	0.0	0.1	0.0	445.9	27.5	0.4	1.3	2.7	1.7	3.0	0.0	46.1	1.4	2.2	0.0	954.2
TRADE	28001	Domestic Trade	3,312.9	0.0	0.0	0.0	-58.8	0.0	2,664.7	65.9	6.3	5.5	24.1	16.6	5.6	0.0	365.5	26.9	0.0	0.0	6,435.3
		Total	14,595.7	9,098.9	4,239.4	608.4	2,273.3	557.9	8,645.5	1,889.0	89.3	12.1	1,041.9	418.8	61.8	831.8	2,788.8	85.7	954.2	6,435.3	54,027.3

*All values are in millions of dollars.

Source: Minnesota IMPLAN Group (MIG), Inc., 1997 IMPLAN Data.

Table 23. Cowlitz County Aggregate Social Accounting Matrix, 1997

	Institution Receipts (READ ACROSS) / Institution Payments (READ DOWN)	Industry Total	Commodity Total	FACTORS: Employee Compensation	Proprietary Income	Other Property Income	Indirect Business Taxes	INSTITUTIONS: Households	Federal Govt. Non-Defense	Federal Govt. Defense	Federal Govt. Investment	State/Local Govt. NonEduc.	State/Local Govt. Educ.	State/Local Govt. Investment	Enterprises (Corps.)	Capital	Inventory Additions/ Deletions	TRADE: Foreign Trade	Domestic Trade	
		1001	2001	5001	6001	7001	8001	10000	11001	11002	11003	12001	12002	12003	13001	14001	14002	25001	26001	Total
	1001 Industry Total	0.0	2,275.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	394.6	1,920.4	4,590.5
	2001 Commodity Total	943.6	0.0	0.0	0.0	0.0	0.0	869.1	3.6	10.5	0.0	57.5	123.3	17.8	0.0	274.7	9.8	0.0	0.0	2,310.0
FACTORS	5001 Employee Compensation	1,345.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1,345.0
FACTORS	6001 Proprietary Income	168.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	168.7
FACTORS	7001 Other Property Income	583.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	583.7
FACTORS	8001 Indirect Business Taxes	140.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	140.5
INSTITUTIONS	10000 Households	0.0	0.5	1,101.7	159.6	158.9	0.0	40.9	327.7	0.0	0.0	115.7	0.0	0.0	68.6	111.0	0.0	6.3	0.0	2,093.0
INSTITUTIONS	11001 Federal Govt. NonDefense	0.0	0.0	190.3	9.1	0.1	12.0	233.1	0.0	0.0	0.0	0.0	0.0	0.0	54.6	0.0	0.0	0.0	0.4	499.5
INSTITUTIONS	11002 Federal Govt. Defense	0.0	0.0	0.0	0.0	0.0	0.0	0.0	12.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	12.5
INSTITUTIONS	11003 Federal Govt. Investment	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
INSTITUTIONS	12001 State/Local Govt. NonEduc.	0.0	27.2	18.0	0.0	7.3	128.5	16.1	108.1	0.0	0.0	0.0	0.0	0.0	3.3	23.5	0.0	0.1	4.1	336.2
INSTITUTIONS	12002 State/Local Govt. Educ.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	130.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	130.3
INSTITUTIONS	12003 State/Local Govt. Investment	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	21.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	21.4
INSTITUTIONS	13001 Enterprises (Corporations)	0.0	0.0	1.1	0.0	204.1	0.0	0.0	10.7	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	216.1
INSTITUTIONS	14001 Capital	0.0	5.6	0.0	0.0	212.3	0.0	160.5	35.8	2.0	0.0	0.0	0.0	0.0	89.3	0.0	0.0	3.6	88.4	597.6
INSTITUTIONS	14002 Inventory Additions/Deletions	0.0	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.0	2.5	10.3	15.2
TRADE	25001 Foreign Trade	186.7	0.0	0.0	0.0	2.1	0.0	107.7	0.9	0.0	0.0	1.0	0.6	1.2	0.0	108.4	0.5	4.0	0.0	413.0
TRADE	26001 Domestic Trade	1,219.5	0.0	34.0	0.0	-1.1	0.0	665.6	0.1	0.0	0.0	10.2	6.5	2.4	0.0	81.7	4.8	0.0	0.0	2,023.6
	Total	4,587.7	2,310.0	1,345.0	168.7	583.7	140.5	2,093.0	499.5	12.5	0.0	336.2	130.3	21.4	216.1	608.4	15.2	413.0	2,023.6	15,496.7

*All values are in millions of dollars.

Source: Minnesota IMPLAN Group (MIG), Inc., 1997 IMPLAN Data.

Table 24. Lewis County Aggregate Social Accounting Matrix, 1997

	Institution Receipts (READ ACROSS) / Institution Payments (READ DOWN)		Industry Total	Commodity Total	Employee Compensation	Proprietary Income	Other Property Income	Indirect Business Taxes	Households	Federal Govt. Non-Defense	Federal Govt. Defense	Federal Govt. Investment	State/Local Govt. NonEduc.	State/Local Govt. Educ.	State/Local Govt. Investment	Enterprises (Corps.)	Capital	Inventory Additions/ Deletions	Foreign Trade	Domestic Trade	
			FACTORS						INSTITUTIONS										TRADE		
			1001	2001	5001	6001	7001	8001	10000	11001	11002	11003	12001	12002	12003	13001	14001	14002	25001	26001	Total
	1001	Industry Total	0.0	1,520.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	131.4	1,167.0	2,819.3
	2001	Commodity Total	530.5	0.0	0.0	0.0	0.0	0.0	653.9	7.1	10.1	0.0	49.9	104.6	17.4	0.0	168.9	6.9	0.0	0.0	1,549.4
FACTORS	5001	Employee Compensation	848.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	848.5
FACTORS	6001	Proprietary Income	127.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	127.8
FACTORS	7001	Other Property Income	420.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	420.1
FACTORS	8001	Indirect Business Taxes	115.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	115.7
INSTITUTIONS	10000	Households	0.0	0.1	675.2	121.0	120.2	0.0	31.0	270.2	0.0	0.0	82.4	0.0	0.0	53.4	107.4	0.0	6.4	0.2	1,467.5
INSTITUTIONS	11001	Federal Govt. NonDefense	0.0	0.0	119.9	6.9	0.1	11.5	161.5	0.0	0.0	0.0	0.0	0.0	0.0	39.1	64.4	0.0	0.0	1.5	404.9
INSTITUTIONS	11002	Federal Govt. Defense	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.2
INSTITUTIONS	11003	Federal Govt. Investment	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
INSTITUTIONS	12001	State/Local Govt. NonEduc.	0.0	24.4	15.1	0.0	6.7	104.2	11.2	108.1	0.0	0.0	0.0	0.0	0.0	2.4	0.0	0.0	0.1	7.8	280.0
INSTITUTIONS	12002	State/Local Govt. Educ.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	110.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	110.2
INSTITUTIONS	12003	State/Local Govt. Investment	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	20.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	20.5
INSTITUTIONS	13001	Enterprises (Corporations)	0.0	0.0	0.7	0.0	145.9	0.0	0.0	6.6	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	153.3
INSTITUTIONS	14001	Capital	0.0	3.7	0.0	0.0	151.8	0.0	75.8	0.0	1.1	0.0	6.5	0.0	0.0	58.4	0.0	0.0	35.7	53.3	386.3
INSTITUTIONS	14002	Inventory Additions/Deletions	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.7	0.0	0.3	2.5	11.9
TRADE	25001	Foreign Trade	81.0	0.0	0.0	0.0	1.5	0.0	76.8	0.9	0.0	0.0	1.0	0.5	1.1	0.0	10.4	0.6	0.5	0.0	174.3
TRADE	26001	Domestic Trade	694.1	0.0	37.6	0.0	-6.2	0.0	457.3	0.6	0.0	0.1	9.4	5.1	2.1	0.0	26.0	4.4	0.0	0.0	1,232.4
		Total	2,817.8	1,549.4	848.5	127.8	420.1	115.7	1,467.5	404.8	11.2	0.1	280.0	110.2	20.5	153.3	387.8	11.9	174.3	1,232.4	10,133.5

*All values are in millions of dollars.

Source: Minnesota IMPLAN Group (MIG), Inc., 1997 IMPLAN Data.

Table 25. Skamania County Aggregate Social Accounting Matrix, 1997

					FACTORS				INSTITUTIONS										TRADE		
		Institution Receipts (READ ACROSS)																			
		Institution Payments (READ DOWN)	Industry Total	Commodity Total	Employee Compen-sation	Proprietary Income	Other Property Income	Indirect Business Taxes	House-holds	Federal Govt. Non-Defense	Federal Govt. Defense	Federal Govt. Investment	State/Local Govt. NonEduc.	State/Local Govt. Educ.	State/Local Govt. Investment	Enterprises (Corps.)	Capital	Inventory Additions/ Deletions	Foreign Trade	Domestic Trade	
			1001	2001	5001	6001	7001	8001	10000	11001	11002	11003	12001	12002	12003	13001	14001	14002	25001	26001	Total
	1001	Industry Total	0.0	105.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.3	79.7	195.0
	2001	Commodity Total	29.5	0.0	0.0	0.0	0.0	0.0	39.2	6.1	4.2	0.0	9.5	8.3	2.3	0.0	9.1	0.5	0.0	0.0	108.9
FACTORS	5001	Employee Compensation	63.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	63.1
	6001	Proprietary Income	8.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.7
	7001	Other Property Income	31.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	31.8
	8001	Indirect Business Taxes	5.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.8
INSTITUTIONS	10000	Households	0.0	0.0	53.5	8.3	16.2	0.0	4.2	28.3	0.0	0.0	12.4	0.0	0.0	6.6	15.2	0.0	0.8	53.5	199.0
	11001	Federal Govt. NonDefense	0.0	0.0	7.9	0.5	0.0	0.2	22.5	0.0	0.0	0.0	0.0	0.0	0.0	2.9	96.2	0.0	0.0	16.6	149.8
	11002	Federal Govt. Defense	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.8	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.0	0.0	0.0	4.6
	11003	Federal Govt. Investment	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
	12001	State/Local Govt. NonEduc.	0.0	3.3	1.7	0.0	1.2	5.6	1.6	108.1	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.1	121.7
	12002	State/Local Govt. Educ.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.9
	12003	State/Local Govt. Investment	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.1
	13001	Enterprises (Corporations)	0.0	0.0	0.0	0.0	10.7	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.3
	14001	Capital	0.0	0.5	0.0	0.0	11.2	0.0	9.2	0.0	0.0	0.0	82.5	0.0	0.0	1.7	0.0	0.0	5.1	16.0	127.0
	14002	Inventory Additions/Deletions	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.1	0.8
TRADE	25001	Foreign Trade	4.5	0.0	0.0	0.0	0.1	0.0	11.1	0.4	0.0	0.0	0.2	0.0	0.3	0.0	0.4	0.0	0.1	0.0	17.3
	26001	Domestic Trade	52.5	0.0	0.0	0.0	-7.7	0.0	111.2	1.4	0.4	0.1	3.1	0.5	2.5	0.0	1.8	0.3	0.0	0.0	166.1
		Total	196.0	108.8	63.1	8.7	31.8	5.8	199.0	148.8	4.6	0.1	121.7	8.9	5.1	11.3	126.0	0.8	17.3	166.1	1,223.9

*All values are in millions of dollars.

Source: Minnesota IMPLAN Group (MIG), Inc., 1997 IMPLAN Data.

Table 26. Yakima County Aggregate Social Accounting Matrix, 1997

		Institution Receipts (READ ACROSS)			FACTORS				INSTITUTIONS										TRADE		
		Institution Payments (READ DOWN)	Industry Total	Commodity Total	Employee Compen-sation	Proprietary Income	Other Property Income	Indirect Business Taxes	House-holds	Federal Govt. Non-Defense	Federal Govt. Defense	Federal Govt. Investment	State/Local Govt. NonEduc.	State/Local Govt. Educ.	State/Local Govt. Investment	Enterprises (Corps.)	Capital	Inventory Additions/ Deletions	Foreign Trade	Domestic Trade	
			1001	2001	5001	6001	7001	8001	10000	11001	11002	11003	12001	12002	12003	13001	14001	14002	25001	26001	Total
	1001	Industry Total	0.0	4,971.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	538.5	2,610.7	8,121.0
	2001	Commodity Total	1,709.9	0.0	0.0	0.0	0.0	0.0	2,217.3	46.0	61.0	5.8	152.4	308.0	52.2	0.0	468.0	33.0	0.0	0.0	5,053.6
FACTORS	5001	Employee Compensation	2,449.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2,449.0
FACTORS	6001	Proprietary Income	397.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	397.0
FACTORS	7001	Other Property Income	1,029.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1,029.7
FACTORS	8001	Indirect Business Taxes	328.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	328.8
INSTITUTIONS	10000	Households	0.0	0.0	2,053.4	375.8	373.9	0.0	96.2	776.5	0.0	0.0	296.9	0.0	0.0	309.5	388.4	0.0	20.2	170.9	4,771.6
INSTITUTIONS	11001	Federal Govt. NonDefense	0.0	0.4	338.6	21.3	0.2	29.3	516.4	0.0	0.0	0.0	0.0	0.0	0.0	96.3	116.0	0.0	0.4	0.6	1,121.0
INSTITUTIONS	11002	Federal Govt. Defense	0.0	0.0	0.0	0.0	0.0	0.0	0.0	123.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	123.9
INSTITUTIONS	11003	Federal Govt. Investment	0.0	0.0	0.0	0.0	0.0	0.0	0.0	17.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	17.3
INSTITUTIONS	12001	State/Local Govt. NonEduc.	0.0	66.6	45.0	0.0	5.6	299.5	35.9	108.1	0.0	0.0	0.0	0.0	0.0	5.9	286.2	0.0	0.2	6.6	863.6
INSTITUTIONS	12002	State/Local Govt. Educ.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	322.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	322.8
INSTITUTIONS	12003	State/Local Govt. Investment	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	61.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	61.9
INSTITUTIONS	13001	Enterprises (Corporations)	0.0	0.0	2.0	0.0	359.8	0.0	0.0	19.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	381.0
INSTITUTIONS	14001	Capital	0.0	11.5	0.0	0.0	374.3	0.0	310.1	0.0	0.2	0.0	0.0	0.0	0.0	69.3	0.0	0.0	8.6	731.3	1,505.2
INSTITUTIONS	14002	Inventory Additions/Deletions	0.0	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	52.8	0.0	0.9	2.3	57.1
TRADE	25001	Foreign Trade	177.1	0.0	0.0	0.0	3.7	0.0	249.6	6.4	1.7	2.4	2.9	1.3	3.5	0.0	116.7	3.6	1.7	0.0	574.5
TRADE	26001	Domestic Trade	2,029.4	0.0	0.0	0.0	-87.6	0.0	1,344.2	24.6	60.8	9.2	26.5	13.6	6.2	0.0	75.5	20.5	0.0	0.0	3,522.6
		Total	8,120.7	5,053.6	2,449.0	397.0	1,029.7	328.8	4,771.6	1,121.0	123.9	17.3	863.6	322.8	61.9	381.0	1,505.2	57.1	574.5	3,522.6	30,698.3

*All values are in millions of dollars.

Source: Minnesota IMPLAN Group (MIG), Inc., 1997 IMPLAN Data.

Projections

The Washington State Office of Financial Management (OFM) has prepared population projections for each of the counties in the state. For this study, we have reviewed and are using the medium projections prepared by the OFM. High and low projections are also available from the state, but we feel the medium projections provide the most likely forecast for each of the five counties.

Clark County

Clark County has been one of the fastest growing counties in the state over the past few decades, averaging annual growth of over 3% between 1969 and 1998. It is expected that population growth will remain strong, but will slow slightly in the future, sustaining an average annual growth of 2.5% (see Table 27). The greatest growth will be occurring in the 45 and older age groups. It is estimated that there will be over 497,000 people in Clark County in the year 2020.

Table 27. Clark County Population Projections

Age	1990	1995	2000	2005	2010	2015	2020	AARG*
Total	238,053	290,997	345,999	386,258	422,482	458,666	497,199	2.49%
0-4	18,915	23,902	27,330	28,976	30,990	33,519	36,101	2.18%
5-9	19,480	24,105	28,919	30,783	32,126	34,285	37,203	2.18%
10-14	19,129	23,035	28,062	31,872	33,317	34,662	37,102	2.23%
15-19	16,948	20,260	24,575	28,365	31,628	32,795	34,174	2.37%
20-24	14,599	17,705	21,714	23,897	26,586	29,104	30,023	2.43%
25-29	18,335	21,285	23,166	25,187	27,395	30,180	32,943	1.97%
30-34	20,935	23,995	26,485	26,747	28,475	31,070	34,270	1.66%
35-39	21,298	25,257	28,560	29,401	29,237	30,969	34,004	1.57%
40-44	19,570	23,978	28,443	30,734	30,975	30,665	32,494	1.70%
45-49	14,906	21,039	25,557	29,438	31,420	31,362	31,046	2.48%
50-54	10,978	15,934	21,638	25,600	29,305	31,130	30,923	3.51%
55-59	8,956	11,576	16,374	21,576	25,344	28,993	30,759	4.20%
60-64	8,811	9,346	11,807	16,030	20,992	24,645	28,276	3.96%
65-69	8,317	8,884	9,428	11,403	15,260	19,989	23,531	3.53%
70-74	6,682	7,931	8,452	8,725	10,439	13,905	18,275	3.41%
75-79	4,922	5,865	7,025	7,356	7,559	9,017	11,991	3.01%
80-84	3,007	3,888	4,667	5,519	5,792	5,961	7,105	2.91%
85+	2,265	3,012	3,797	4,649	5,642	6,415	6,979	3.82%
Total 5-year annual growth		4.10%	3.52%	2.23%	1.81%	1.66%	1.63%	

Source: Washington State Office of Financial Management revised medium projection.

Employment in Clark County has been expanding rapidly in recent years. Total employment has grown consistently over the past three decades at over 4%. Past trends suggest that employment in Clark County will

remain strong, with a steady growth rate over the next 20 years. The greatest growth and largest sector is expected to remain in the services sector.

Cowlitz County

Cowlitz County has experienced slow growth and at some points declines in its population over the past few decades, averaging just 1% in the 1969-1998 time period. Since 1990 it has grown between one and two percent annually, and it is expected to continue at that annual rate, 1.65% on average, through the next 20 years (see Table 28). As is true in the other counties as well, the greatest growth is expected to occur in the 50 and older age groups. By 2020, Cowlitz County is expected to have 134,000 residents.

Table 28. Cowlitz County Population Projections

Age	1990	1995	2000	2005	2010	2015	2020	AARG*
Total	82,119	89,402	94,383	102,763	112,904	123,161	134,122	1.65%
0-4	6,218	6,788	6,574	7,176	8,079	8,888	9,482	1.42%
5-9	6,450	7,030	7,267	7,338	7,969	8,834	9,729	1.38%
10-14	6,360	6,929	7,313	7,795	7,875	8,444	9,346	1.29%
15-19	5,841	6,052	6,547	7,142	7,650	7,647	8,196	1.14%
20-24	4,838	4,552	4,765	5,520	6,194	6,568	6,533	1.01%
25-29	5,900	5,821	5,355	5,953	6,993	7,676	8,143	1.08%
30-34	6,569	6,854	6,391	6,176	6,856	7,953	8,755	0.96%
35-39	6,669	7,278	7,279	6,972	6,744	7,406	8,603	0.85%
40-44	6,160	7,040	7,498	7,695	7,355	7,064	7,753	0.77%
45-49	4,913	6,311	7,143	7,787	8,037	7,603	7,306	1.33%
50-54	3,944	5,067	6,420	7,447	8,187	8,401	7,922	2.35%
55-59	3,587	4,088	5,209	6,799	8,004	8,794	9,025	3.12%
60-64	3,651	3,617	4,064	5,330	7,053	8,296	9,165	3.12%
65-69	3,477	3,529	3,460	3,981	5,299	7,013	8,297	2.94%
70-74	2,816	3,151	3,158	3,162	3,678	4,904	6,533	2.84%
75-79	2,223	2,335	2,617	2,662	2,703	3,150	4,235	2.17%
80-84	1,487	1,635	1,729	1,982	2,041	2,084	2,452	1.68%
85+	1,016	1,325	1,594	1,846	2,187	2,436	2,647	3.24%
Total 5-year annual growth		1.71%	1.09%	1.72%	1.90%	1.75%	1.72%	

Source: Washington State Office of Financial Management revised medium projection.

Employment in Cowlitz County has averaged between one and two percent in the past 20 years. Recent trends have shown a shift from manufacturing to the services sector. Whereas manufacturing was the largest employment sector in 1990, services is expected to continue to surpass manufacturing in number of employees in the future.

Lewis County

The population of Lewis County has been growing slowly over the past 30 years, averaging about 1.5% growth per year. It appears it will continue at that approximate rate for the next 20 years (see Table 29). The greatest growth will occur in the 50 and older age groups, who will experience growth of about 2%. Lewis County will be home to 92,000 residents by the year 2020.

Table 29. Lewis County Population Projections

Age	1990	1995	2000	2005	2010	2015	2020	AARG*
Total	59,358	65,498	70,286	76,004	80,843	86,249	92,395	1.49%
0-4	4,403	4,918	5,138	5,615	5,975	6,377	6,732	1.43%
5-9	4,873	5,135	5,431	5,671	5,975	6,374	6,864	1.15%
10-14	4,883	5,390	5,546	5,897	5,977	6,280	6,733	1.08%
15-19	4,393	4,981	5,411	5,661	5,910	5,949	6,262	1.19%
20-24	3,132	3,400	3,766	4,263	4,475	4,694	4,709	1.37%
25-29	3,796	4,092	4,168	4,593	5,038	5,342	5,648	1.33%
30-34	4,411	4,686	4,672	4,729	5,027	5,576	5,993	1.03%
35-39	4,532	5,072	5,161	5,104	4,988	5,320	5,965	0.92%
40-44	4,142	4,906	5,361	5,484	5,267	5,129	5,499	0.95%
45-49	3,326	4,323	5,063	5,565	5,615	5,358	5,218	1.51%
50-54	2,795	3,457	4,441	5,233	5,687	5,745	5,466	2.26%
55-59	2,717	2,843	3,518	4,563	5,328	5,817	5,897	2.62%
60-64	2,707	2,677	2,802	3,519	4,537	5,323	5,850	2.60%
65-69	2,770	2,580	2,540	2,693	3,386	4,398	5,197	2.12%
70-74	2,383	2,492	2,318	2,301	2,445	3,109	4,071	1.80%
75-79	1,906	1,970	2,079	1,949	1,942	2,086	2,688	1.15%
80-84	1,203	1,413	1,476	1,578	1,488	1,503	1,637	1.03%
85+	986	1,163	1,395	1,586	1,783	1,869	1,966	2.33%
Total 5-year annual growth		1.99%	1.42%	1.58%	1.24%	1.30%	1.39%	

Source: Washington State Office of Financial Management revised medium projection.

Employment in Lewis County has grown slowly but steadily in past years, averaging between one and two percent growth overall. Future growth is anticipated to be concentrated in the retail trade and services sectors.

Skamania County

Skamania County is a small county in terms of population. However, it has been showing steady growth over the past decade at an average rate of 2% annually. Population in Skamania County is expected to grow over the next 20 years at a rate slightly lower than that, at 1.5% annually (see Table 30). Again, the greatest growth will be in the 50 and older age groups, which will average between 2-3% annual growth. In 2020, Skamania County is expected to have a total population of nearly 13,000.

Table 30. Skamania County Population Projections

Age	1990	1995	2000	2005	2010	2015	2020	AARG*
Total	8,289	9,551	10,179	10,883	11,468	12,131	12,809	1.46%
0-4	644	680	693	755	807	854	879	1.04%
5-9	734	785	755	769	808	866	921	0.76%
10-14	723	821	826	807	802	841	904	0.75%
15-19	576	713	778	796	774	768	804	1.12%
20-24	358	493	565	637	656	650	639	1.95%
25-29	572	563	600	674	739	774	778	1.03%
30-34	752	744	649	677	732	813	859	0.44%
35-39	743	873	804	709	711	771	860	0.49%
40-44	657	816	900	840	731	730	791	0.62%
45-49	534	694	827	913	850	743	737	1.08%
50-54	415	558	700	836	913	857	751	2.00%
55-59	376	421	548	693	822	901	852	2.76%
60-64	323	371	404	529	668	795	874	3.37%
65-69	300	314	344	376	495	629	752	3.11%
70-74	217	278	281	307	336	446	571	3.28%
75-79	188	186	231	236	257	284	378	2.36%
80-84	125	143	141	176	180	198	221	1.92%
85+	52	98	133	153	187	211	238	5.20%
Total 5-year annual growth		2.87%	1.28%	1.35%	1.05%	1.13%	1.09%	

Source: Washington State Office of Financial Management revised medium projection.

Employment in Skamania County has averaged between one and two percent in the past 10 years. Recent trends, showing a shift in employment from the manufacturing to services sector, are expected to continue in the near future.

Yakima County

Yakima County has been growing steadily at about 1.5% annually, on average, since 1969. It is expected that the county will continue to grow at a slightly slower rate over the next 20 years, at 1.2% annually (see Table 31). As with all the other counties studied here, the age structure of the population will change over this period of time, with the greatest growth occurring in the 50 and older age groups. The population of Yakima County is expected to grow to nearly 272,000 by the year 2020.

Table 31. Yakima County Population Projections

Age	1990	1995	2000	2005	2010	2015	2020	AARG*
Total	188,823	204,100	215,637	227,620	239,436	255,252	271,726	1.22%
0-4	16,810	19,436	18,310	18,764	19,707	21,407	22,585	0.99%
5-9	16,414	18,119	19,987	18,968	19,258	20,525	22,256	1.02%
10-14	15,640	17,137	18,483	20,286	19,150	19,657	20,949	0.98%
15-19	14,460	14,598	15,995	17,380	18,908	17,992	18,493	0.82%
20-24	12,648	10,884	11,295	12,711	13,962	15,311	14,528	0.46%
25-29	14,299	14,170	12,459	12,967	14,534	16,248	17,483	0.67%
30-34	14,595	15,995	15,230	13,575	14,048	16,089	17,851	0.67%
35-39	14,274	15,949	16,821	15,912	14,143	14,909	17,054	0.59%
40-44	12,339	14,969	16,412	17,229	16,112	14,552	15,352	0.73%
45-49	9,988	12,590	15,139	16,587	17,303	16,238	14,709	1.30%
50-54	8,096	10,115	12,683	15,245	16,655	17,445	16,285	2.36%
55-59	7,389	7,913	9,937	12,534	15,064	16,610	17,301	2.88%
60-64	7,516	7,044	7,562	9,571	12,149	14,722	16,230	2.60%
65-69	7,196	6,908	6,507	7,019	8,974	11,560	14,004	2.24%
70-74	6,225	6,365	6,102	5,780	6,285	8,154	10,565	1.78%
75-79	5,195	5,086	5,262	5,052	4,837	5,334	6,982	0.99%
80-84	3,256	3,808	3,787	3,959	3,835	3,731	4,160	0.82%
85+	2,483	3,014	3,666	4,081	4,512	4,768	4,939	2.32%
Total 5-year annual growth		1.57%	1.11%	1.09%	1.02%	1.29%	1.26%	

Source: Washington State Office of Financial Management revised medium projection.

Yakima County has the largest agricultural base of the five counties, with farm employment and agricultural services comprising a significant share of total employment. Total employment in Yakima County has averaged between one and two percent annual growth over the past 20 years, while agricultural employment has experienced greater volatility in growth rates. Agricultural employment is expected to remain important, and the retail trade and services are also expected to remain large employment sectors within the county.

Final Demand Framework

Travel Impacts

Dean Runyan Associates (DRA) has estimated travel impacts for the State of Washington and its 39 counties for the years 1993-1999.[1] While the study was not done in sufficient detail to make specific inferences, it does provide useful information for this analysis. NEA used the DRA study results to assess current and past impacts on economic development in each of the five counties in this study.

1 Dean Runyan Associates, for Washington State Office of Trade and Economic Development, Washington State Tourism. 2000. Washington State County Travel Impact 1993-1999. September.

Clark County

Total destination spending in Clark County has increased from $156.3 million in 1993 to $231.3 million in 1999, nearly a 50% increase. Total earnings that were generated by travel spending increased over 50% in the same time period to $73.5 million in 1999. Travel spending has also contributed to employment in the county, from 3,710 jobs in 1993 to 4,770 jobs in 1998 and dropping again to 4,480 jobs in 1999, or 21% growth over the 1993-1999 time period. The greatest share of the spending and associated employment generated continues to be in eating and drinking establishments. Tax revenues generated from travel spending have been growing rapidly, with 46% growth between 1993 and 1999.

Cowlitz County

Total destination spending in Cowlitz County has increased from $69.2 million in 1993 to $88.2 million in 1999, a 27% increase. Total earnings that were generated by travel spending increased at the same rate in the same time period to $25.4 million in 1999. Travel spending has contributed to employment in the county to a lesser degree, from 1,650 jobs in 1993 to 1,920 jobs in 1999, or 16% growth. However, it reached a high of 1,940 in 1997 and appears to currently be at a plateau. The greatest share of the spending and associated employment generated continues to be in eating and drinking establishments. Tax revenues generated from travel spending have been growing rapidly, with 31% growth between 1993 and 1999.

Lewis County

Total destination spending in Lewis County has increased from $81.6 million in 1993 to $103.9 million in 1999, a 27% increase. Total earnings that were generated by travel spending increased at about the same rate in the same time period to $25.9 million in 1999. Travel spending has only slightly contributed to employment in the county, up from 1,950 jobs in 1993 to 2,060 jobs in 1998 and down to just 2,020 jobs in 1999, or 4% growth overall. The greatest share of the spending and associated employment generated continues to be in eating and drinking establishments. Tax revenues generated from travel spending have been growing rapidly, with 29% growth between 1993 and 1999.

Skamania County

Total destination spending in Skamania County has increased from $33.4 million in 1993 to $37.5 million in 1999, a 12% increase. Total earnings that were generated by travel spending increased at the same rate in the same time period to $10.9 million in 1999. Travel spending has contributed to employment in the county to a slightly greater degree, from

730 jobs in 1993 to 890 jobs in 1998 and down to 830 jobs in 1999, or 14% growth overall. The greatest share of the travel spending continues to be in eating and drinking establishments. Tax revenues generated from travel spending have been also been growing, with 14% growth between 1993 and 1999.

Yakima County

Total destination spending in Yakima County has increased from $190.8 million in 1993 to $229.6 million in 1999, a 20% increase. Total earnings that were generated by travel spending increased at a slightly slower rate of 17% in the same time period to $59.2 million in 1999. Travel spending has only slightly contributed to employment in the county, up from 3,900 jobs in 1993 to 4,250 jobs in 1997 and down to just 3,980 jobs in 1999, or 2% growth overall. The greatest share of the spending and associated employment generated continues to be in eating and drinking establishments. Tax revenues generated from travel spending have been growing rapidly, with 23% growth between 1993 and 1999.

Expenditure Patterns

The purpose of the SR 504 Feasibility Study is to determine the economic, engineering, and environmental viability of connecting SR 504 to state and federal roads in the vicinity of the Mount St. Helens National Monument. One part of the economic viability is concerned with the potential economic impact a connecting route might have on county economies affected by the new route. Traveler expenditures, particularly those by tourists, are expected to be a major factor in any impacts.

To estimate these impacts, it is necessary to have an understanding of how travelers might spend money in the county economies. There are no expenditure pattern studies related directly to the local area. Therefore, it was necessary to use expenditure data collected in other areas as a basis for this understanding. Visitor expenditure data was obtained from a number of studies from the northwestern United States.[2] These data were reviewed for total expenditures by visitor (lodging) types and for major expenditure categories. The Southwestern Oregon Visitors Association study provides a

[2] Dean Runyan Associates and The Lyon Group, *Oregon Travel & Tourism - Visitor Profile, Marketing and Economic Impacts*, prepared for the Oregon Tourism Division, Dean Runyan Associates, Portland, Oregon, 1989; Morse, Kathleen and Randall Anderson, *Tourism in the Columbia River Gorge*, Washington Sea Grant Marine Advisory Publication, University of Washington, Seattle, Washington, 1988; Shelby, Bo, Rebecca L. Johnson, and Mark Brunson, *Comparative Analysis of Whitewater Boating Resources in Oregon: Toward a Regional Model of River Recreation*, WRRI-108, Water Resources Research Institute, Oregon State University, Corvallis, Oregon, November, 1990, Reid, Rebecca L., *A Comparative Profile of Southwestern Oregon Visitors*, prepared for Southwestern Oregon Visitors Association, Southern Oregon Regional Services Institute, Southern Oregon State College, Ashland, Oregon, 1991.

rich database describing visitors to southwest Oregon, where they go, what they do, what they buy, and how much they spend. The visitor expenditure data in this study provides the most comprehensive localized source identified in this effort. This data was used, along with the other data sources, to construct expenditure patterns. The expenditure by lodging type adopted for this study is presented in the table below.

Table 32. Expenditures Per Visitor Day

Expenditure Category	Overnight Visitors by Lodging Choice			Day Use
	Camping	Hotel/ Motel	Friends/Relatives	
Lodging	$4.88	$29.16	$$0.00	$0.00
Restaurants	$5.44	$18.70	$9.59	$6.21
Food	$4.32	$2.34	$3.48	$0.91
Gas/Auto	$5.59	$6.26	$4.54	$2.50
Recreation	$3.58	$4.96	$2.85	$0.66
Gifts	$2.43	$6.79	$9.58	$3.14
Total	**$26.24**	**$68.21**	**$30.04**	**$13.42**

Source: Reid, Rebecca L., *A Comparative Profile of Southwestern Oregon Visitors*, prepared for Southwestern Oregon Visitors Association, Southern Oregon Regional Services Institute, Southern Oregon State College, Ashland, Oregon, 1991. Updated to 1997 dollars using retail trade group chain-type price index for Gross Domestic Product, Bureau of Economic Analysis, U. S. Department of Commerce (website www.bea.doc.gov/bea/dn2/contribpr.htm/)

It is important to note that only those expenditures related to the activity of concern that actually occur in the impact area should be used for measuring impacts. This requires careful definition of the activity(ies) of concern. For example, travel, as related primarily to tourism, must be explicitly defined so that it can be measured accurately. For example, the purchase of airline tickets to travel to the region are not associated with regional tourism activity, as the expenditures occur outside the region.

Transforming Expenditure Data into Direct Effects

Each type of cost or expenditure collected above must be categorized and placed in its appropriate economic sector. This process is called developing estimates of final demand (also referred to as direct effects). These linkages are of two types, intermediate demand (businesses selling to other businesses, such as a motel buying electricity), and consumption demand (businesses selling to consumers within the area or exporting outside the area).

Estimating the Indirect Effects and Induced Effects

These expenditure patterns, together with data from the input-output model containing a detailed description (528 sectors) of the total economy, are used to profile the direct effects of travel related activities on each sector within the economy.

Once the estimates of final demand are complete, they are used with the input-output models to estimate the indirect and induced effects of travel. The effects of lodging types such as motel/hotel, friends/relatives, campers, and day-use expenditures will be estimated separately and aggregated to obtain total effects. The effects measured are employment, employee compensation, and total output by industry.

There will be a large quantity of detailed data that can be displayed in a wide variety of formats as a result of this analysis. Detailed results will be provided for those directly impacted and those experiencing significant indirect and induced impacts. For clarity, the overall results will also be summarized by aggregating to the "Industry Group" format as displayed in Tables 17 through 21.